What is claimed is:

1. A method for identifying a peptide that binds to a surface having a target geometrical shape, comprising:

b) contacting the surface having the target geometrical shape, with a phage display library under reaction conditions, wherein the phage express a peptide; and

c) identifying peptides that bind to the surface having the target geometrical shape.

2. The method of claim 1, wherein the target geometrical shape of the surface is a flat surface.

3. The method of claim 1, wherein the target geometrical shape of the surface is a smooth, curved surface.

4. The method of claim 1, wherein the surface is hydrophobic.

5. The method of claim 1, wherein at least three rounds of biopanning are performed by repeating the contacting, identifying, and amplifying at least three times.

6. The method of claim 5, wherein during each successive round of biopanning, the reaction conditions are more stringent than the prior round.

7. The method of claim 1, further comprising amplifying the phage using a sloppy amplification reaction.

8. The method of claim 1, wherein the phage are contacted with a surface that is substantially identical in composition to the surface, but comprise a different geometrical shape.

9. The method of claim 8, wherein the substantially identical surface comprises crystals of a molecule that comprises the flat surface or the smooth, curved surface.

10. The method of claim 1, wherein the surface is a substrate for scanning probe microscopy.

11. The method of claim 1, wherein the surface comprises graphite.

12. The method of claim 11, wherein the surface comprises highly ordered pyrolytic graphite.

13. The method of claim 1, wherein the surface comprises a surfactant.

14. The method of claim 13, wherein the phage bind to both the surface and the surfactant.

15. The method of claim 1, wherein the flat surface or smooth, curved surface comprises boron nitride, lead sulfide, zinc selenide, cadmium selenide, cadmium sulfide, gallium arsenide, aluminum arsenide, zinc sulfide, gallium nitrate, indium phosphate, or gallium arsenide.

16. The method of claim 1, wherein the surface comprises mica, silicon, or annealed gold.

17. The method of claim 1, wherein the surface comprises Teflon.

18. The method of claim 1, further comprising determining the amino acid sequence of the identified peptide.

19. The method of claim 1, further comprising determining the nucleotide sequence of a phage polynucleotide that encodes the identified peptide.

20. An isolated peptide or polypeptide comprising at least two peptide units, wherein each peptide unit specifically binds a target geometrical shape, and wherein the isolated peptide or polypeptide is a recombinant peptide or polypeptide.

21. An isolated peptide or polypeptide according to claim 20, wherein the at least two peptide units are linked by a linkage other than a peptide bond.

22. An isolated peptide or polypeptide according to claim 20, wherein the peptide further comprises a nanocode.

23. An isolated peptide or polypeptide according to claim 20, wherein at least two of the at least two peptide units comprise a different amino acid sequence.

24. An isolated peptide or polypeptide according to claim 20, wherein at least one of the at least two peptide units is identified according to the method of claim 1.

25. A scanning probe microscopy (SPM) substrate, comprising a substrate comprising an SPM material, wherein the substrate has a flat surface comprising an isolated peptide or polypeptide bound thereto.

26. The SPM substrate of claim 25, wherein the SPM material comprises graphite.

27. The SPM substrate of claim 25, wherein the isolated peptide or polypeptide is associated with a biomolecule.

28. The SPM substrate of claim 25, wherein the peptide is identified according to the method of claim 1.

29. A graphite or carbide electrode having a flat surface or a smooth, curved surface, wherein a peptide is specifically bound to the surface.

30. The graphite or carbide electrode of claim 29, wherein the peptide consists essentially of between about 7 and 20 amino acids.

31. The graphite or carbide electrode of claim 29, wherein the peptide is isolated according to the method of claim 1.